



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,357	07/17/2003	Hideo Kobayashi	SHX 340	5352
23581	7590	03/27/2006	EXAMINER	
KOLISCH HARTWELL, P.C. 200 PACIFIC BUILDING 520 SW YAMHILL STREET PORTLAND, OR 97204			GOFF II, JOHN L	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,357

Applicant(s)

KOBAYASHI ET AL.

Examiner

John L. Goff

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
4a) Of the above claim(s) 11-39 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/6/06
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed on 1/10/06.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maenza (U.S. Patent 5,968,305) in view of Young (U.S. Patent 6,561,640).

Maenza discloses a method of curing adhesive between two disc substrates, e.g. including optical recording medium/layers, comprising providing two disc substrates with an ultraviolet (uv) light curable adhesive therebetween and applying uv light from a narrowband source such as a laser through one of the disc substrates to the adhesive to cure the adhesive (Figures 3 and 4 and Column 3, lines 8-32). Maenza teaches a narrowband uv light source is preferable to a wideband uv light source (Column 1, lines 48-56). Maenza teaches the uv light is applied in a

Art Unit: 1733

line by line form fashion from the outer edge of the disc substrates to the inner edge (or the inner edge to the outer edge), and Maenza teaches the disc substrates may rotate during application of the uv light, i.e. the uv light and disc substrates are moved relative to each other (Column 3, lines 33-61). Maenza does not specifically teach applying the uv light from a light emitting semiconductor element, e.g. light emitting diode (LED). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the uv light from a narrowband uv light source as taught by Young using any of the well known and functionally equivalent narrowband uv light sources known in the art including laser, LED, etc. as shown for example by Young as only the expected results would be achieved.

Young discloses curing a uv light curable adhesive using a narrowband uv light source preferably rather than a wideband uv light source wherein the narrowband uv light sources include laser, LED, etc. (Column 2, lines 29-45 and Column 4, lines 20-42).

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maenza and Young as applied to claims 1 and 5 above, and further in view of Tokuda et al. (U.S. Patent 6,294,239).

Maenza and Young as applied above teach all of the limitations in claims 2 and 3 except for a specific teaching of using a uv curable adhesive cured at 280 to 450 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the uv curable adhesive in Maenza as modified by Young any well known and conventional uv curable adhesive for bonding two disc substrates such as that shown for example by Tokuda et al. curable at 360 to 450 nm (resulting in increased transmissivity after curing) which prevents warpage and distortion of the disc substrates.

Art Unit: 1733

Tokuda et al. disclose a uv curable adhesive for bonding two disc substrates without warpage or distortion that is cured at 360 to 450 nm (Column 1, lines 37-44 and 54-58).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maenza and Young as applied to claims 1 and 5 above, and further in view of Anzai et al. (U.S. Patent 6,485,808).

Maenza and Young as applied above teach all of the limitations in claim 4 except for the specific distance between the uv light source and the disc substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the distance of the uv light source from the disc substrate in Maenza as modified by Young as a function of the intensity of the uv light source, the time the uv light source is applied, etc. as doing so would have required nothing more than ordinary skill and routine experimentation, it being noted Anzai et al. are exemplary in the art of applying uv light from a uv light source to a disc substrate wherein the distance between the source and substrate depends upon the intensity of the light source, the time the uv light source is applied, etc. wherein 10 mm or less is specifically shown to not deform the disc substrates (Column 16, lines 30-67 and Column 17, lines 1-58).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maenza and Young as applied to claims 1 and 5 above, and further in view of Amo et al. (U.S. Patent 5,779,855).

Maenza and Young as applied above teach all of the limitations in claim 6 except for a specific teaching of applying uv light to the edges of the disc substrates, i.e. the adhesive present at and protruding from the edges of the disc substrate. It would have been obvious to one of

Art Unit: 1733

ordinary skill in the art at the time the invention was made to include in Maenza as modified by Young the application of uv light to the edges of the disc substrates, i.e. uv light applied from outside the circumference of the disc substrates, to better cure the adhesive along the edges as was well known in the art as shown for example by Amo et al.

Amo et al. disclose curing a uv curable adhesive between two disc substrates wherein additional uv light is applied from outside the circumference of the disc substrates to the edges of the disc substrates to better cure the adhesive along the edges (Figure 1 and Column 5, lines 30-33).

8. Claims 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maenza and Young as applied to claims 1 and 5 above, and further in view of Ohno et al. (U.S. Patent 6,613,170).

Maenza and Young as applied above teach all of the limitations in claims 7, 8, and 10 except for a specific teaching of rotating the disc substrates to spread the adhesive therebetween, detecting a thickness of the adhesive layer, and curing the adhesive in two steps. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the uv light in Maenza as modified by Young using the technique suggested by Ohno et al. to form the adhesive layer with an even thickness.

Ohno et al. disclose curing a uv curable adhesive between two disc substrates to an even thickness comprising providing two disc substrates with a uv light curable adhesive therebetween, rotating the disc substrates at a high speed to evenly spread the adhesive including during the rotating the thickness of the adhesive layer is detected and uv light is applied only to the inner and/or outer circumference of the disc substrates to cure the adhesive at the inner and

Art Unit: 1733

outer edges, and after detecting the desired preset thickness of the adhesive layer transferring the disc substrates to a next process for completely curing the adhesive layer (Figures 14 and 15 and Column 17, lines 15-67 and Column 18, lines 1-47).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maenza, Young, and Amo et al. as applied to claim 6 above, and further in view of Vromans et al. (U.S. Patent 6,108,933).

Maenza, Young, and Amo et al. as applied above teach all of the limitations in claim 9 except for a specific teaching of applying uv light to the edges of the disc substrates, i.e. the adhesive present at and protruding from the edges of the disc substrate, in an atmosphere where an oxygen concentration is lower than in air. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the uv light to the edges of the disc substrate in Maenza as modified by Young and Amo et al. in an atmosphere where the oxygen concentration is lower than in air to prevent the radicals formed during curing from being destroyed by oxygen as was well known in the art and shown for example by Vromans et al.

Vromans et al. disclose curing a uv curable adhesive between two disc substrates comprising applying uv light to the edges of the disc substrates in an atmosphere where an oxygen concentration is lower than in air to prevent the radicals formed during curing from being destroyed by oxygen (Column 1, lines 51-58)

Response to Arguments

10. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection. The previous 35 USC 112 rejections have been

Art Unit: 1733

overcome. In view of applicants amendment the previous 35 USC 102 rejections over Baggett et al. (U.S. Patent 6,730,917) and Maenza are withdrawn. The new limitations are addressed above.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is (571) 272-1216. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John L. Goff



JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300